



October 6, 2005

Ms. Jean A. Webb  
Office of the Secretariat  
Commodity Futures Trading Commission  
Three Lafayette Centre  
1155 21<sup>st</sup> Street, NW  
Washington, DC 20581

OFFICE OF THE SECRETARIAT

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RECEIVED  
C.F.T.C.

**RE: Price Banding on GLOBEX for Options Contracts**  
**Submitted per Sec. 5c(c)(1) of the CEA and Regulation Sec. 40.6(a).**  
**CME Submission # 05-~~998~~ 99**

Dear Ms. Webb:

Chicago Mercantile Exchange ("CME" or "Exchange") hereby certifies with the Commission the following modification to the price banding practice for GLOBEX order entry. The Exchange certifies that this amendment complies with the Act and rules thereunder.

The practice of "price banding" on the GLOBEX electronic trading system was originally introduced<sup>1</sup> on April 22, 2001. The intent of price banding is to mitigate the impact of erroneous order entries. An overly aggressive erroneous order, i.e. limit bids at prices well above the market or limit offers at prices well below the market, can trigger a sequence of market-moving trades that requires subsequent cancellations. To lessen such possibilities of market destabilizing events, price bands are established to prevent the entry of overly aggressive orders. For example, for the E-mini S&P 500 futures, a limit bid at a price of more than 12.00 points above the last price<sup>2</sup> cannot be entered into the GLOBEX system and will be rejected. Likewise, a limit offer at a price of more than 12.00 points below the last price will be rejected.

The foregoing practice has proven to be effective for futures markets. While similar price banding practice has been applied to options markets on GLOBEX, it appears that certain adjustments are necessary. While a series of options on a particular futures contract may trade frequently, any one option with a specific strike price may not trade or even have "quote traffic" frequently. Thus, the last price on a specific option is a poor anchor for the price bands. The price of the underlying futures contract may have changed substantially since the "last price" of a

<sup>1</sup> CME Submission #01-28, dated April 5, 2001.

<sup>2</sup> The last price is usually the price at which the last trade was executed. It may also be a better bid or offer.

20 South Wacker Drive, Chicago IL 60606-7499, Tel. 312-930-1000

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particular option was updated, thereby causing the market value of a formerly out-of-money option to increase substantially while the price band is locked in place by the "last price," for example.

Further, it is also not desirable to establish price bands with the same "width" for options with different strikes. The price bands for "out-of-money" options<sup>3</sup> should be narrower than those for "in-the-money" options, reflecting the differences in the extent to which bids and offers depart from their fair market value may be considered erroneous.

Based on the foregoing considerations, a dynamic price banding scheme will be deployed on selected options and options combinations trading on GLOBEX. There are a number of possible options:

- The price bands shall be established based on either (a) the "last price" of the option instrument (or combination of instruments), or (b) the Theoretical Options Price (TOP) based on well established options pricing algorithms, or (c) if practical, the more recent of the "last price" and TOP.

The TOP for each option contract is updated frequently, based on the prevailing price of the underlying futures contracts and other relevant information. The Exchange may elect to deploy any one of the preceding options based upon current market conditions and practicality considerations.

- The width of the price bands shall be established pursuant to any of the following options:
  - (a) fixed width, e.g. 6 index points, for the entire option series, regardless of the strike price in relation to the current futures price, or other characteristics of the options. This is the current price banding practice;
  - (b) a fixed width based on the delta<sup>4</sup> of the option. The delta of the option shall be estimated by the TOP calculation. Based the range of values the estimated delta falls under, the width of the price band shall be established. E.g. for options with estimated delta between 0 and .10, the band shall be 2 index points; for options with estimated delta between .10 and .25, the width of the price band shall be 4 index points; for options with estimated delta of .25 and higher, the width of the price band shall be 6 index points. As the price of the underlying futures contract changes, the delta of a specific option may fall in

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<sup>3</sup> Generally speaking, low delta options or options combinations require tighter bands than high delta options or options combinations.

<sup>4</sup> Delta of an option is the "first order" sensitivity of the price of the options to a unitary change in the price of its underlying futures. For example, the value of a 20 delta option will increase or decrease by 0.20 with a 1-point move in the futures contract, ceteris paribus.

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different ranges. The applicable width of the price band becomes dynamic in nature;

- (c) a band based on a certain percentage of the TOP, with the percentage assigned according to the estimated delta of the option. E.g. if the estimated delta of the option falls between .10 and .25, a 20% band is assigned. Thus, the width of the band shall be  $20\% \times \text{TOP}$  of the option instrument. Please note that the percentage band for an option series may vary, depending on the delta of the specific instrument; or
- (d) a combination of (b) and (c), i.e. the larger of the price band based on a fixed, delta-based, schedule and a percentage band. E.g. for a specific option, the fixed schedule call for a 4 index point band while the percentage banding calls for a 5 index point band. The larger of the two bands applies.

To the extent that the prevailing market condition dictates a wider price band, e.g. in a (temporarily) volatile market in which prices fluctuate quickly, the Exchange may elect to temporarily relax or suspend the price banding restriction.

The Exchange shall continue to disclose information regarding its price banding practice. Specifically, the width of the band, either fixed for the whole option series, or in accordance with delta ranges, and, if applicable, the percentage bands will be available on the Exchange website at the following URL: <http://www.cme.com/clearing/clr/tp/tradeprac/priceband1472.html>.

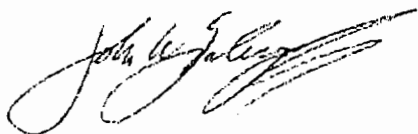
The modified price banding shall be implemented on the trade date of October 10, 2005. Initially, this practice will be applied to the options on E-mini S&P 500, E-mini NASDAQ-100, E-mini Russell 2000 futures as well as the European-style options on EuroFX and Japanese Yen futures. The bands shall be anchored by the Theoretical Options Prices. The width of the bands shall be as follows. As

Delta Level	Options E-mini S&P 500, E-mini NASDAQ-100, E-mini Russell 2000	European Style Options on EuroFX, Japanese Yen Contracts
0 - 0.10	2 index points	6 ticks
0.10 - 0.25	4 index points	12 ticks
0.25 - 1.00	6 index points	20 ticks

Please do not hesitate to contact Mr. Richard Co at 312-930-3227 or [rco@cme.com](mailto:rco@cme.com) if any questions arise during the processing of this submission. Please reference our CME Submission #05-099 on all future correspondence for this submission.

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Sincerely,

A handwritten signature in black ink, appearing to read "John W. Labuszewski", with a stylized, sweeping flourish extending from the end.

John W. Labuszewski, Managing Director  
Research & Product Development